

**Abstract**

The invention relates to an apparatus for mixing, drying and coating pulverulent,

- 5 granular or shaped loose material in a fluidized bed, in particular for use in a process  
for producing supported catalysts for gas-phase oxidations, which comprises a  
container (10) for accommodating the loose material, with a bowl-like depression (17)  
being provided in a lower region (13) of the container (10), a central tube (27) for  
introducing a gas, with the central tube entering the container in an upper region (12) of  
10 the container (10), extending essentially axially downward in the container (10) and  
opening into the depression (17), an essentially annular deflection shield (29) which is  
fixed to the central tube (27) in the upper region (12) of the container (10), a guide ring  
15 (31) which is located in the lower region (13) of the container (10) and surrounds the  
central tube (27) essentially concentrically at a distance (L) for part of its length so that  
a first opening (34) is formed between the wall of the container (10) at the upper edge  
(22) of the depression and the lower end (33) of the guide ring (31) and a second  
opening (36) is formed between the deflection shield (29) and the upper edge (35) of  
the guide ring (31), and means, for example valves (21), for introducing a fluid into the  
container (10). In the apparatus of the present invention, the outer wall of the central  
20 tube (27) is at least partly provided with an adhesion-reducing coating (38). In a  
preferred embodiment, the distance (L) between the wall of the central tube (27) and  
the wall of the guide ring (27) is greater than the open height (H3) of the first opening  
(34). The invention also provides a process for producing supported catalysts using  
such an apparatus.